



**BILLING CODE 4140-01-P**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**National Institutes of Health**

**Government-Owned Inventions; Availability for Licensing**

**AGENCY:** National Institutes of Health, HHS.

**ACTION:** Notice.

**SUMMARY:** The invention listed below is owned by an agency of the U.S.

Government and is available for licensing to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

**FOR FURTHER INFORMATION CONTACT:** Dr. Barry Buchbinder, 240-627-3678; [barry.buchbinder@nih.gov](mailto:barry.buchbinder@nih.gov). Licensing information and copies of the U.S. patent application listed below may be obtained by communicating with the indicated licensing contact at the Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rockville, MD, 20852; tel. 301-496-2644. A signed Confidential Disclosure Agreement will be required to receive copies of unpublished patent applications.

**SUPPLEMENTARY INFORMATION:** Technology description follows.

*Recombinant HIV-1 Envelope Protein for Vaccine Use*

*Description of Technology:*

In pursuit of an effective vaccine to end the global HIV-1/AIDS pandemic,

researchers at the Vaccine Research Center (“VRC”) continue to study the structure of HIV-1. Recently, these researchers have determined the three-dimensional structure of the HIV-1 Envelope trimeric ectodomain (“Env”), comprised of three gp120 and three gp41 subunits, in its prefusion, mature, closed conformation.

The researchers hypothesize that immunization with the prefusion, closed HIV-1 Env protein will elicit a neutralizing immune response. The VRC researchers engineered a portion of the HIV-1 Env trimer to stabilize it in this closed conformation for use as an immunogen.

This technology is available for licensing for commercial development in accordance with 35 U.S.C. § 209 and 37 CFR Part 404, as well as for further development and evaluation under a research collaboration.

*Potential Commercial Applications:*

- Vaccine for prevention of HIV-1 infection.
- Therapeutic vaccine for treatment of HIV-1 infection.

*Competitive Advantages:*

- Currently, no licensed HIV-1 vaccine exists.

*Development Stage:*

- In vitro studies characterizing the immunogen and its interaction with HIV antibodies
- In vivo results including immunogenicity in rabbits and guinea pigs, neutralizing activity of resulting serum

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*Publications:* Pancera M, *et al.* Structure and immune recognition of trimeric pre-fusion HIV-1 Env. *Nature*. 2014 Oct 23; 514(7523):455-61. [PMID: 25296255].

*Intellectual Property:* HHS Reference Number E-178-2014 includes U.S. Provisional Patent Application No. 62/046,059 filed September 4, 2014; U.S. Provisional Patent Application No. 62/136,480 filed March 21, 2015; PCT Application No. PCT/US2015/048729 filed September 4, 2015; U.S. Patent Application No. 15/508,885 filed March 3, 2017; and EPO Patent Application No. 15766697.5 filed March 29, 2017.

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*Collaborative Research Opportunity:* The National Institute of Allergy and Infectious Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize HIV-1 immunogens for treating or preventing HIV-1 infection. For collaboration opportunities, please contact Dr. Barry Buchbinder, 240-627-3674; barry.buchbinder@nih.gov.

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